

ARGUMENT

In this Reply Brief, Appellants wish to address certain points set forth in the Examiner's Answer, section entitled "(10) Response to Argument", as mailed on May 9, 2006.

First, the Examiner asserts that Takano and Tanaka are analogous art because they both relate to bearings that support a rotating shaft.¹ However, such a mere facial similarity does not make Takano and Tanaka analogous art. Instead, there are many different considerations that apply to bearings that support rotating shafts, depending upon the particular use of the rotating shaft. More specifically, the screw extruder of Takano is subject to an axial load as well as a radial load, which gives rise to different considerations than the radially loaded bearing in Tanaka's pulley unit. Moreover, the amount of radial loading in a screw extruder would be very much different than that in a pulley unit, which gives rise to still further different considerations. Thus, the mere fact that two references discuss rotating shafts does not make them analogous art.

Second, the Examiner's reliance on the gap in Takano is misplaced for at least the following two reasons.

(i) The gap 9 cited by the Examiner² is not an effective clearance within the bearing itself but, instead, is a gap between the outer peripheral surface of outer ring 8 and the housing 3. See Takano at Figs. 4 and 5, as well as at col. 2, lines 45-52. On the other hand, the effective clearance recited in the claims is a gap within the bearing itself, wherein the distance between the inner and outer raceways is greater than the diameter of the rolling element disposed therebetween.³ Accordingly, Takano's gap 9 is not the same as the effective radial clearance as claimed.

¹ Examiner's Answer at page 5, 1st full paragraph.

² Examiner's Answer at page 5, last paragraph.

³ In contrast, by way of background, a pre-load (as discussed in Takano) exists wherein the distance between the inner and outer raceways is smaller than the diameter of the rolling element.

(ii) The Examiner asserts that, with respect to Takano's gap, "it is clear that the contact area is gradually shifted in the reference to Takano due to the presence of the clearance. See gap 9."⁴ This simply is not true. Takano does disclose a positive gap applied between the respective ball bearings, wherein the gap is quantified as 0.01 mm. See Takano at: col. 2, lines 24-36; col. 4, lines 1-19, and 59-60; col. 5, lines 18-34; col. 6, lines 14-16, and 48-52; and col. 7, lines 36-41. However, nowhere does Takano discuss any shift at all. Further, as can be seen from Fig. 4 in the present specification, an effective clearance of 0.01 mm does not produce any shift in the contact area; instead, the retainer and the rolling elements remain stationary, which gives rise to the wear problems discussed in the "Summary of the Invention" section of the Appeal Brief. On the contrary, it is effective clearances of greater than 0.01 mm which produce the shift as set forth in claims 17 and 18. Again, see Fig. 4 in the present specification.

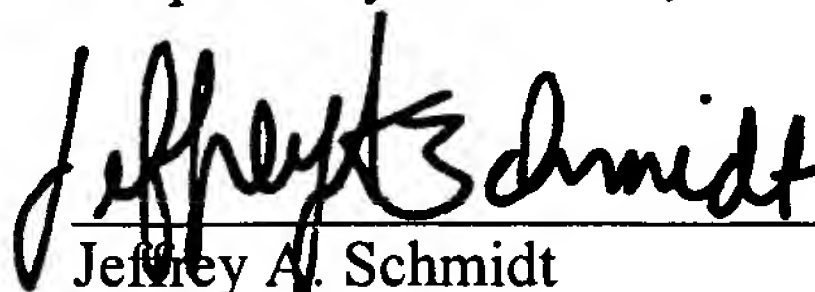
Accordingly, for the sake of argument alone, even assuming that one of ordinary skill in the art were motivated to combine Takano and Tanaka as suggested by the Examiner, the resulting combination would include an effective clearance of 0.01 mm, which would not produce the claimed shift.

⁴ Examiner's Answer at page 5, last paragraph.

CONCLUSION

For the above reasons as well as the reasons set forth in Appeal Brief, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal. An early and favorable decision on the merits of this Appeal is respectfully requested.

Respectfully submitted,



Jeffrey A. Schmidt
Registration No. 41,574

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: June 27, 2006